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EXAMINER	
BARTON, JEFFREY THOMAS	
ART UNIT	PAPER NUMBER
1753	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/788,339	TSUGE, SADAJI	
	Examiner	Art Unit	
	Jeffrey T. Barton	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 3 November 2006 does not place the application in condition for allowance.

Status of Rejections Pending Since the Office Action of 20 September 2006

2. The rejection of claim 12 under 35 U.S.C. §112, second paragraph is withdrawn due to Applicant's amendment.

3. All other rejections are maintained.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 9-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no explicit description of "a continuous, uninterrupted n-type amorphous silicon layer that is more highly doped compared to that of the crystalline silicon substrate" (Claims 9 and 13) or "a more highly doped n-type amorphous silicon layer compared to that of the n-type crystalline silicon

substrate" (Claim 12) in the specification as originally filed. There is no statement of the relative doping level of this layer compared to the substrate present in the specification.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-307791 (herein referred to as JP '791) in view of Yamagishi et al (U.S. Patent 6,300,556), Brandhorst, Jr (U.S. Patent 4,131,486), and Spitzer (U.S. Patent 4,667,060).

JP '791 discloses a solar cell module comprising solar cells **1** encapsulated within a sealing resin **2**, and having a glass front surface side light transmitting member **3** (which is at the principal light incidence side) and a resin film rear surface member **4** (see Figure 1; and paragraphs 0023 and 0026-0028). Both the front surface side light transmitting member **3** and the rear surface member **4** transmit incident light (see Figures 1, 5, and 6). The sealing resin **2** is interposed between the front surface light transmitting member **3** and the solar cells **1** and is also interposed between the rear surface member **4** and the solar cells **1** (see Figure 1). With respect to the solar cell in JP '791's Figure 2, note in JP '791's paragraph 0024 that it is taught that on one principal plane of the crystalline silicon substrate **11**, there is laminated an i-type a-Si layer **12** and p-type a-Si layer **13**. It is also taught that on the principal plane on another side of the crystalline silicon substrate **11** there is laminated i-type a-Si layer **16** and n-type a-Si layer **17** (see paragraph 0024). The n-type a-Si layer **17** is depicted in Figure 2 as being continuous and uninterrupted, and corresponds to the instant continuous, uninterrupted highly doped n-type amorphous silicon layer. It is acknowledged that JP

'791's Figure 2 is a schematic. However, it would have been well within the skill of an artisan to make said n-type a-Si layer **17** continuous and uninterrupted because it is shown as being continuous and uninterrupted in said Figure 2, and so as to avoid short circuit of the solar cell **1**. The solar cell **1** has two transparent electrodes **14** and **18** at the top and bottom surfaces (see Figure 2; and paragraph 0024). These electrodes allow light to enter from both the front and rear surfaces of the solar cell module (see Figures 1, 5, and 6). The rear surface member is formed of a transparent resin film (PET) (see Figure 1; and paragraph (0025)).

The solar cell module of JP '791 differs from the instant invention because JP '791 does not disclose that the front surface side light transmitting member contains sodium and that its p-i-n junction is formed with the crystalline substrate **11** and the thin film amorphous semiconductor layers **12, 13** such that the crystalline substrate **11** is formed between the thin film amorphous semiconductor layer **13** and the light incidence side light transmitting member **3**. JP '791 is also silent concerning the relative doping levels of the n-type substrate and n-type amorphous silicon layer.

Yamagishi et al discloses the use of soda lime glass, which contains sodium, as a surface member (see col. 7, line 29). Soda lime glass is a conventional glass used in solar cell modules because it is inexpensive.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the solar cell module of JP '791 to use soda lime glass as the front surface member, as taught by Yamagishi et al, because soda lime glass is very inexpensive and provides excellent weather resistance. The selection of a

known material based on its suitability for its intended use supported a *prima facie* obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07.

Regarding the position of the crystalline substrate **11** with respect to the thin film amorphous layers **12, 13** and the light incidence side light transmitting member, the solar cell module of JP '791 allows light to enter from both sides (Figures 1, 5, and 6), but the front surface side light transmitting member **3** is at the principal light incidence side (see paragraphs 0023 and 0026-0028). Therefore, light coming in from either direction contributes to the generation of electricity. Furthermore, with respect to the solar cell in JP '791's Figure 2, note in JP '791's paragraph 0024 that it is taught that on one principal plane of the crystalline silicon substrate **11**, there is laminated an i-type a-Si layer **12** and p-type a-Si layer **13**. It is also taught that on the principal plane on another side of the crystalline silicon substrate **11** there is laminated i-type a-Si layer **16** and n-type a-Si layer **17** (see paragraph 0024). JP '791 does not require said one principal plane on which the i-type a-Si layer **12** and p-type a-Si layer **13** to be the front face. JP '791 exemplifies the front face and recites "front face" in parenthesis for layers **12** and **13**, and exemplifies the rear face and recites "rear face" in parenthesis for layers **16** and **17** (see paragraph 0024; and Figure 2). However, JP '791 does not require layers **12** and **13** to be at the front surface and layers **16** and **17** to be at the rear face. Thus, a skilled artisan readily recognizes that the solar cell seen in Figure 2 of JP '791 can be placed in JP '791's module in Figure 1 with layers **12** and **13** at the front face (i.e., layers **12** and **13** closer to light transmitting member **3**) or at the rear face (i.e.,

layers **12** and **13** closer to rear surface member **4**). Such is the case because the solar cell in said Figure 2 can receive light from both sides (see Figure 1; and the first sentence of paragraph 0024). When said layers **12** and **13** are at the rear face, the p-i-n junction between layers **11**, **12**, and **13** is also at the rear face, and thus, the n-type crystalline silicon substrate **11** is between principal light transmitting member **3** and p-type a-Si layer **13**. Furthermore, the presence of a photovoltaic junction at the rear face of a solar cell is well known in the art as shown by Brandhorst, Jr (Figures 2 and 4; and col. 1, line 60 through col. 2, line 25) and Spitzer (see Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have prepared JP '701's solar cell module such that the solar cell in JP '791's Figure 2 is present in the module with the p-i-n junction between layers **11**, **12** and **13** at the rear face of the solar cell, and thus, the crystalline silicon substrate **11** is between principal light transmitting member **3** and p-type a-Si layer **13** because light can enter from both sides of JP '791's solar cell and thus, the p-i-n junction can be closer to either the light transmitting member **3** or the rear surface member **4**; JP '791 is not limited to layers **12** and **13** to be at the front surface; and the presence of a photovoltaic junction at the rear face of a solar cell is well known in the art as shown by Brandhorst, Jr and Spitzer. In other words, to take the solar cell in JP '791's Figure 2, flip it over it over, and then insert it into JP '791's Figure 1, would have been within the level of ordinary skill in the art because light can enter from both sides of JP '791's solar cell in Figure 2, and thus, the p-i-n junction can be closer to either the light transmitting member **3** or the rear surface member **4**; JP '791 is not limited to layers **12** and **13** to be at the front surface;

and the presence of a photovoltaic junction at the rear face of a solar cell is well known in the art as shown by Brandhorst, Jr and Spitzer

In addition, Brandhorst, Jr. teaches that providing a more highly doped layer of the same conductivity type as the substrate on the side of the substrate opposite the active junction provides a blocking field that prevents minority carrier recombination at this surface, increasing the effective diffusion length of the minority carriers, which improves cell performance. (Column 3, lines 48-64)

It would therefore have been obvious to provide the amorphous n-type layer of the JP '791 reference with a higher doping level than the n-type substrate, because Brandhorst, Jr. teaches that this arrangement provides a blocking field that prevents minority carrier recombination at this surface, increasing the effective diffusion length of the minority carriers, which improves cell performance. One having ordinary skill in the art would have had a reasonable expectation that this benefit would result with layers and substrates of either n-type or p-type.

10. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanoka et al (U.S. Patent 6,353,042) in view of Yamagishi et al (U.S. Patent 6,300,556), JP 11-307791 (JP '791), Brandhorst, Jr (U.S. Patent 4,131,486), and Spitzer (U.S. Patent 4,667,060).

Hanoka et al disclose a solar cell module having a plurality of solar cells **22** encapsulated within a sealing material **10** (see Figure 2). A front surface light transmitting member **26** is made of glass and is at the principal light incidence side, and

a rear surface member **28** is made of glass or a resin, such as Tedlar™, a transparent film (see col. 5, line 65 to col. 6, line 9). A transparent film would allow light to enter from both sides of the solar cell. The solar cells **22** may comprise crystalline or amorphous material and may be made of silicon or one of several other semiconductor materials (see col. 1, lines 31-35; and col. 6, lines 19-59). Hanoka et al specifically discloses a module as shown in figure 2, "a solar cell module **20** in which the encapsulant material **10** encapsulates interconnected crystalline silicon solar cells **22**" (see col. 5, lines 55-57). Hanoka et al is silent on the details of the junction within the crystalline silicon solar cells **22**.

Hanoka et al discloses a front surface light transmitting member **26** is made of glass, and a rear surface member **28** is made of glass or a resin, such as Tedlar™, a transparent film (see col. 5, line 65 to col. 6, line 9). This structure permits light to enter from either side of the solar cell.

The solar cell module disclosed by Hanoka et al differs from the instant invention because Hanoka et al does not disclose the following:

a. The front surface member containing sodium.

b. The solar cell having an n-type crystalline silicon substrate.

c. The p-i-n junction is formed between the n-type crystalline substrate and the thin film i-type and n-type amorphous semiconductor layer such that the n-type crystalline substrate is formed between the p-type thin film amorphous semiconductor layer and the light incidence side light transmitting member.

Yamagishi et al discloses the use of soda lime glass, which contains sodium, as a surface member (see col. 7, line 29). Soda lime glass is a conventional glass used in solar cell modules because it is inexpensive.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the solar cell module of Hanoka et al to use soda lime glass as the front surface member, as taught by Yamagishi et al, because soda lime glass is very inexpensive and provides excellent weather resistance.

JP '791 disclose a solar cell module comprising solar cells **1** encapsulated within a sealing resin **2**, and having a glass front surface side light transmitting member **3** (which is at the principal light incidence side) and a resin film rear surface member **4** (see Figure 1; and paragraphs 0023 and 0026-0028). Both the front surface side light transmitting member **3** and the rear surface member **4** transmit incident light (see Figures 1, 5, and 6). The sealing resin **2** is interposed between the front surface light transmitting member **3** and the solar cells **1** and is also interposed between the rear surface member **4** and the solar cells **1** (see Figure 1). With respect to the solar cell in JP '791's Figure 2, note in JP '791's paragraph 0024 that it is taught that on one principal plane of the crystalline silicon substrate **11**, there is laminated an i-type a-Si layer **12** and p-type a-Si layer **13**. It is also taught that on the principal plane on another side of the crystalline silicon substrate **11** there is laminated i-type a-Si layer **16** and n-type a-Si layer **17** (see paragraph 0024). The n-type a-Si layer **17** is depicted in Figure 2 as being continuous and uninterrupted, and corresponds to the instant continuous, uninterrupted highly doped n-type amorphous silicon layer. It is acknowledged that JP

'791's Figure 2 is a schematic. However, it would have been well within the skill of an artisan to make said n-type a-Si layer **17** continuous and uninterrupted because it is shown as being continuous and uninterrupted in said Figure 2, and so as to avoid short circuit of the solar cell **1**. The solar cell **1** has two transparent electrodes **14** and **18** at the top and bottom surfaces (see Figure 2; and paragraph 0024). These electrodes allow light to enter from both the front and rear surfaces of the solar cell module (see Figures 1, 5, and 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the solar cell module of Hanoka et al to use a crystalline silicon substrate and an amorphous layer forming a heterojunction, as taught by JP '791, because the solar cell of JP '791 efficiently utilizes all of the light incident on both sides of the solar cell.

Regarding the position of JP '791's crystalline substrate with respect to JP '791's thin film amorphous layer and Hanoka et al's front surface light transmitting member **26**, Hanoka et al's module allows light to enter from both sides since both the front surface light transmitting member **26** and the rear surface member **28** are transparent, as noted above. Therefore, light coming in from either direction contributes to the generation of electricity. Furthermore, with respect to the solar cell in JP '791's Figure 2, note in JP '791's paragraph 0024 that it is taught that on one principal plane of the crystalline silicon substrate **11**, there is laminated an i-type a-Si layer **12** and p-type a-Si layer **13**. It is also taught that on the principal plane on another side of the crystalline silicon substrate **11** there is laminated i-type a-Si layer **16** and n-type a-Si layer **17** (see

paragraph 0024). JP '791 does not require said one principal plane on which the i-type a-Si layer **12** and p-type a-Si layer **13** to be the front face. JP '791 exemplifies the front face and recites "front face" in parenthesis for layers **12** and **13**, and exemplifies the rear face and recites "rear face" in parenthesis for layers **16** and **17** (see paragraph 0024; and Figure 2). However, JP '791 does not require layers **12** and **13** to be at the front surface and layers **16** and **17** to be at the rear face. Thus, a skilled artisan readily recognizes that the solar cell seen in Figure 2 of JP '791 can be placed in Hanoka et al's module in Figure 2 with layers **12** and **13** at the front face (i.e., layers **12** and **13** closer to light transmitting member **26**) or at the rear face (i.e., layers **12** and **13** closer to rear surface member **28**). Such is the case because the solar cell in JP '791's Figure 2 can receive light from both sides (see Figure 1; and the first sentence of paragraph 0024). When said layers **12** and **13** are at the rear face, the p-i-n junction between layers **11, 12**, and **13** is also at the rear face, and thus, the n-type crystalline silicon substrate **11** is between principal light transmitting member **26** of Hanoka et al and said p-type a-Si layer **13**. Furthermore, the presence of a photovoltaic junction at the rear face of a solar cell is well known in the art as shown by Brandhorst, Jr (Figures 2 and 4; and col. 1, line 60 through col. 2, line 25) and Spitzer (see Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have prepared Hanoka et al's solar cell module such that the solar cell in JP '791's Figure 2 is present in the module with the p-i-n junction between layers **11**, **12** and **13** at the rear face of the solar cell, and thus, the crystalline silicon substrate **11** is between principal light transmitting member **26** of Hanoka et al and the p-type a-Si layer **13**

because light can enter from both sides of JP '791's solar cell and thus, the p-i-n junction can be closer to either the light transmitting member **26** or the rear surface member **28**; JP '791 is not limited to layers **12** and **13** to be at the front surface; and the presence of a photovoltaic junction at the rear face of a solar cell is well known in the art as shown by Brandhorst, Jr and Spitzer.

In addition, Brandhorst, Jr. teaches that providing a more highly doped layer of the same conductivity type as the substrate on the side of the substrate opposite the active junction provides a blocking field that prevents minority carrier recombination at this surface, increasing the effective diffusion length of the minority carriers, which improves cell performance. (Column 3, lines 48-64)

It would therefore have been obvious to provide the amorphous n-type layer of the JP '791 reference, used in the module of Hanoka, with a higher doping level than the n-type substrate, because Brandhorst, Jr. teaches that this arrangement provides a blocking field that prevents minority carrier recombination at this surface, increasing the effective diffusion length of the minority carriers, which improves cell performance. One having ordinary skill in the art would have had a reasonable expectation that this benefit would result with layers and substrates of either n-type or p-type.

Response to Arguments

11. Applicant's arguments filed 3 November 2006 have been fully considered but they are not persuasive.

Regarding the new limitation to a layer "more highly doped . . . compared to that of the n-type crystalline silicon substrate", Applicant points to several paragraphs that describe a function of this layer in the disclosed configuration, but provides no support for the claimed comparative doping levels. The examples provide no description of the dopant concentration in any portion of the instant cells. Applicant cites four U.S. patents (7,095,083; 6,541,695; 5,747,864; and 4,459,163) which use the term "highly doped" in their disclosures, but this is not persuasive because there has been no specific evidence provided to support the position that the term "highly doped" must carry any connotation relative to any other specific portion of a device. (i.e. whether a layer is "highly doped" relative to any one, all, or some of the other layers of a device). No clear support in the specification is present for the specific interpretation now given by Applicant. The claims must therefore be rejected as failing to comply with the written description requirement.

Applicant's arguments against the combinations of references made in the rejections above focus on the nature of the problem being solved. The Examiner points out that if the prior art teaches all structural limitations of an apparatus claim, the claim must be rejected on this basis. Whether any particular advantage is recognized in the prior art is irrelevant if the prior art teaches the claimed structure. The Examiner maintains that valid motivations are provided in the prior art for all modifications required in the rejection made under 35 U.S.C. §103(a) above, and such motivations are clearly stated in the rejections. The Examiner further maintains that all structural limitations of the claims are met by the prior art as combined above. The fact that applicant has

recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Jeffrey T. Barton whose telephone number is (571) 272-1307. The examiner can normally be reached on M-F 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTB
22 January 2007

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SUPERVISORY PATENT EXAMINER
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